

# ATTACHMENT 5

## Budgets

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## **5.1 Project Budgets**

Budgets have been produced for each project by Provost & Pritchard Consulting Group in accordance with engineering standard cost estimating procedures. Cost information was obtained from similar project bid canvasses, product vendors, contractors, RS Means (an online construction cost database), electrical and geotechnical sub-consultants as well as Provost & Pritchard's past project experience. Budget sheets were prepared and utilized for the Cost Effectiveness Analyses in Attachment 3. Each budget sheet included an Engineer's Opinion of Probable Construction Costs along with estimates of consultant/proponent costs for administration, planning, design, engineering, environmental, construction contracting, environmental compliance, and construction administration (organized by task). It should be noted that the combined Direct Project Administration (Category (a)) is less than 5% of the overall proposal costs. Project Budgets are included at the end of this Attachment.

### **5.1.1 BVWSD Brackish Groundwater Recovery Project**

#### **Category (a) – Direct Project Administration**

Costs for the tasks associated with Direct Project Administration, including grant administration, labor compliance program preparation and implementation, and preparation of required progress reports and the final report, were estimated as 3% of Categories (b), (c), and (d). Grant administration was estimated at 1.5% of Categories (b), (c), and (d), labor compliance program preparation and implementation at 0.5%, and preparation of required progress reports and the final report at 1%. These percentages are consistent with recent experience from similar DWR grant funded projects in the past. The Project proponents will hire a consultant to assist with the management of the grant, including invoice and reporting preparation. Based on this approach, the Category (a) costs for all four projects were developed in accordance with these percentages.

#### **Category (b) – Land Purchase/Easement**

The District is currently in the process of obtaining the necessary easements adjacent to the Main Drain Canal right-of-way through its Northern Area Pipeline project; the easement for the shallow groundwater collector pipeline and wells will be included in this easement procurement. No additional costs are necessary for the Brackish Groundwater Recovery Project

#### **Category (c) – Planning / Design / Engineering / Environmental Documentation**

Provost & Pritchard and its electrical engineering sub-consultant have prepared labor estimates for Category (c) tasks (summary shown in **Appendix 3.4-K**). Costs for project assessment and evaluation are \$25,000 and has been completed. Project final design and engineering costs were estimated to be \$195,000, including \$15,000 for well design and \$25,000 for electrical design. Electrical final design and well final design costs were provided from consultants with previous experience on similar projects. Survey and utility investigation costs were not included as this is already being completed by the District for the Northern Area Pipeline project. Provost & Pritchard has estimated Final Design as \$155,000, based on prior pipeline design experience on similar projects. The District has completed an EIR for the BVWSD Water Management Program, which includes this project in addition to three other proposed projects; no additional costs are anticipated for this task. Permitting costs include estimates to complete a SWPPP, well permits through County of Kern, and an ISR. From prior experience and known fees from regulatory agencies, \$45,000 has been allocated to obtain the required permits for the project.

#### **Category (d) – Construction / Implementation**

Construction costs were estimated using the preliminary design that has been completed by the initial assessment and evaluation for the project, the cost of construction information from similar projects recently completed, and budgetary estimates received from contractors. Construction was estimated to be \$2.4M from the sources mentioned (as itemized in **Appendix 3.4-K**). With a lower level project complexity, a 10% construction contingency cost was included for the project. \$15,000 has been budgeted for construction contracting, consultant electrical site reviews, and operational start-up assistance (regarding blending parameters). The District will perform construction administration, well

drilling review, and inspection of the pipeline and well construction, and has elected to not include this cost in the budget. \$10,000 has been budgeted for environmental compliance (e.g. SWPPP Practitioner work) and mitigation measures identified in the adopted EIR for the project.

**Project Cost**

The total project cost is estimated to be \$2,802,000 and BVWSD would contribute a 26% cost match that will come from BVWSD's capital improvement funds.

**5.1.2 ID4 CVC Extension Lining Project (Phase 1-Pool No. 7)**

**Category (a) – Direct Project Administration**

Category (a) costs are consistent with the percentages as defined in Section 5.1.1.

**Category (b) – Land Purchase/Easement**

The District is currently identifying locations for temporary construction easements on vacant parcels to provide stockpile locations for construction. Three parcels have been identified, and based on ID4 staff experience for similar properties; the cost is estimated at 10% of \$10,000/acre (industrial area) for 60 acres.

**Category (c) – Planning / Design / Engineering / Environmental Documentation**

Provost & Pritchard prepared a labor estimate for Category (c) tasks. Assessment and Evaluation is set to be completed by early August. Survey time has been estimated for conducting a thorough topographic and boundary survey. Geotechnical work will consist of soils analysis, slope stability analysis, and earthwork recommendations for the budget provided. Project Design work has been estimated based on experience with canal lining projects in the Central Valley. KCWA staff will prepare the CEQA document and special studies (budget includes time for a biologist to review the site). Permitting includes a SWPPP, DCP, and ISR preparation costs by a consultant and applicable fees.

**Category (d) – Construction / Implementation**

Provost & Pritchard estimated construction quantities using earthwork modeling software and cross sections were developed for determining lining areas. Costs were estimated using the bid estimates from similar projects recently completed, and preliminary budget data from a local contractor. Construction is estimated to be \$5.4M (as itemized in **Appendix 3.5-I**). With the large volume of materials on this project, costs can vary significantly between different suppliers and costs can increase or decrease over a short period of time; therefore a 20% construction contingency cost was included for the project. Construction environmental compliance consists of SWPPP/DCP monitoring and reporting as well as a biological pre-construction review and tailgate training with the Contractor. For Construction Administration, the budget includes time for the engineering consultant to perform construction staking and construction administrative tasks; construction reviews will be performed by KCWA staff; and a soils testing firm will conduct compaction/materials testing.

**Project Cost**

The total project cost is estimated to be \$6,124,240 and ID4 would contribute a 34% cost match from its enterprise fund.

**5.1.3 AEWSD In-Lieu Program**

Engineer's opinions of probable project costs for each of the three projects comprising the In-lieu Program were prepared by Provost & Pritchard (AEWSD's consulting engineer), and are presented separately and "rolled up" as one. This estimate is consistent with prior experience on prior projects funded by similar grants.

**Category (a) - Direct Project Administration**

Category (a) costs are consistent with the percentages as defined in Section 5.1.1.

**Category (b) - Land Purchase / Easement**

Costs for this category include preparation and procurement of agreements with in-lieu recharge project landowners and obtaining right of way easements where necessary. Right of way easement costs were estimated using 10% of the land value, estimated at \$3,750 per acre, for a 30' right of way in areas where the District did not have an existing right of way. This estimate is consistent with recent experience on obtaining pipeline right of ways in similar agricultural areas from private landowners.

**Category (c) - Planning / Design / Engineering / Environmental Documentation**

Costs for the power planning portion of this category were based on previously obtained power consultant estimates for the in-lieu projects. Based on similar projects for AEWS, Final Design costs were estimated to be 10% of the projected cost of construction for the in-lieu projects and 8% for the North Canal Pump Back Project (which is further in the design process). Costs for environmental documentation preparation and permitting were based on recent experience with similar projects.

**Category (d) - Construction / Implementation**

Construction costs were estimated using the preliminary design that has been prepared and the cost of construction information from similar projects recently completed, engineer site reviews, record drawing information, and budgetary estimates received from contractors (see **Appendix 3.6-L** for breakdown). Construction related consultant costs were estimated as 10% percent of the estimated cost of construction for Sycamore In-lieu Project and 8% for North Canal Pump Back Project (which will require less effort because the site is already developed). Construction contracting and environmental compliance costs are based on experience with similar projects in the area. Contingency costs were included for the In-lieu Program as a percentage of project construction costs to account for any unforeseen factors. A 10% contingency was used for the North Canal Pump Back and Sycamore in-lieu Projects (which have high levels of project development). A 20% contingency was used for the North Canal In-lieu Project, as this project is less developed.

**Project Cost**

The total In-lieu Program cost is estimated to be \$2,824,600, Categories (a), (b), (c), and (d). AEWS would contribute a 27% cost match from a combination of its funds and from \$369,050 of United States Bureau of Reclamation funds for the Sycamore In-lieu Project.

**5.1.4 BCWD Water Main Replacement and Meter Installation Project**

**Category (a) - Direct Project Administration**

Category (a) costs are consistent with the percentages as defined in Section 5.1.1, with the exception that the Task 1 percentage of (b), (c), and (d) has been increased to 2% as monthly invoices will be needed during construction to reduce cash flow impacts to BCWD.

**Category (b) – Land Purchase/Easement**

No easements or land needs to be obtained for the project.

**Category (c) – Planning / Design / Engineering / Environmental Documentation**

Provost & Pritchard prepared a labor estimate for Category (c) tasks. The Feasibility Study subtask has been initiated for this work but will be completed after notice of grant award. The Rate Study, Outreach, and Prop. 218 Proceedings is budgeted based similar rate studies for small districts conducted by Provost and Pritchard. After notice of grant award, survey time will begin. Estimates for survey and design time are based on two recent water main replacement projects in the Central Valley. A Categorical Exemption is required for water main replacements, and a small budget is needed for that task. Permitting includes a SWPPP, DCP, ISR, and Caltrans encroachment permit preparation costs by a consultant and applicable fees.

**Category (d) – Construction / Implementation**

Provost & Pritchard estimated construction quantities and constructability based on record drawings and review of streets and alleys where the water mains will be installed. Costs were estimated using the bid estimates from similar projects recently completed and vendor material prices. Construction is estimated

to be \$3.1M (as itemized in **Appendix 3.7-D**). As the complexity of the project is relatively minor, a 15% contingency was included in this cost. Construction Environmental compliance consists of SWPPP/DCP monitoring and reporting. As the District does not have full-time staff, consultants will provide most of the construction administration and site reviews for the project.

### **Project Cost**

The total project cost is estimated to be \$3,746,080. BCWD is requesting a DAC funding match waiver for the cost share as documented in Attachment 8.

## **5.2 Proposal Budget**

A Proposal Budget Summary (DWR Table 8) is included at the end of this Attachment. The summary includes the requested grant amount, local cost share, total project cost, and percentage of funding match. With the DAC Funding Match Waiver, the % funding match of the three non-DAC projects is 30%.

As an additional note, each of the projects can be scaled back in size to reduce project costs in the event a partial award is determined to be necessary by DWR as the potential funding amount for the Kern/Tulare Funding Area is limited. The project proponents propose that if the Kern IRWM Grant Application is provided with a partial award that each of the projects be scaled back proportionality. The following are general ways in which each project will be scaled back.

- BVWSD Brackish Groundwater Recovery Project – A reduced number of wells can be drilled (reducing the number of pumps, piping and electrical equipment) and the collector pipeline can be resized and shortened in length.
- ID4 CVC Extension Lining Project – With much of Pool No. 7 being divided into segments due to inverted siphon structures the lining extents can be reduced at logical locations. ID4 will also look further into the geomembrane lining option to determine its feasibility for the CVC Extension.
- AEWS D In-Lieu Program – AEWS D can reevaluate the three projects and determine if one or more projects can be scaled back or possibly removed from the scope of work.
- BCWD Water Main Replacement Project – The water main replacements can be scaled back to specific areas where leakage is most prevalent.

Table 7 – Project Budget					
Proposal Title: <u>Kern IRWM 2014 Drought Solicitation Implementation Grant Proposal</u>					
Project Title: <u>BVWSD Brackish Groundwater Recovery Project</u>					
Project serves a need of a DAC?: NO					
Funding Match Waiver request?: NO					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a)	Direct Project Administration	\$59,984	\$21,016		\$81,000
(b)	Land Purchase/Easement	\$0	\$0		\$0
(c)	Planning/Design/Engineering/Environmental Documentation	\$196,244	\$68,756		\$265,000
(d)	Construction/Implementation	\$1,818,772	\$637,228		\$2,456,000
(e)	Grand Total (Sum rows (a) through (d) for each column)	\$2,075,000	\$727,000		\$2,802,000

Table 7 – Project Budget					
Proposal Title: <u>Kern IRWM 2014 Drought Solicitation Implementation Grant Proposal</u>					
Project Title: <u>ID4 CVC Extension Lining Project (Phase 1-Pool No. 7)</u>					
Project serves a need of a DAC?: NO					
Funding Match Waiver request?: NO					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a)	Direct Project Administration	\$117,380	\$61,220		\$178,600
(b)	Land Purchase/Easement	\$39,433	\$20,567		\$60,000
(c)	Planning/Design/Engineering/Environmental Documentation	\$236,601	\$123,399		\$360,000
(d)	Construction/Implementation	\$3,631,585	\$1,894,055		\$5,525,640
(e)	Grand Total (Sum rows (a) through (d) for each column)	\$4,025,000	\$2,099,240		\$6,124,240

Table 7 – Project Budget					
Proposal Title: <u>Kern IRWM 2014 Drought Solicitation Implementation Grant Proposal</u>					
Project Title: <u>Arvin-Edison WSD In-Lieu Program</u>					
Project serves a need of a DAC?: NO					
Funding Match Waiver request?: NO					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a)	Direct Project Administration	\$60,459	\$21,841	\$0	\$82,300
(b)	Land Purchase/Easement	\$23,508	\$8,492	\$0	\$32,000
(c)	Planning/Design/Engineering/Environmental Documentation	\$255,500	\$92,300	\$0	\$347,800
(d)	Construction/Implementation	\$1,735,533	\$626,967	\$0	\$2,362,500
(e)	Grand Total (Sum rows (a) through (d) for each column)	\$2,075,000	\$749,600	\$0	\$2,824,600
*List sources of funding: USBR Agricultural Water and Energy Conservation Grant = \$369,050					

Table 7 – Project Budget					
Proposal Title: <u>Kern IRWM 2014 Drought Solicitation Implementation Grant Proposal</u>					
Project Title: <u>BCWD Water Main Replacement and Meter Installation Project</u>					
Project serves a need of a DAC?: YES					
Funding Match Waiver request?: YES					
Category		(a)	(b)	(c)	(d)
		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a)	Direct Project Administration	\$126,700	\$0	\$0	\$126,700
(b)	Land Purchase/Easement	\$0	\$0	\$0	\$0
(c)	Planning/Design/Engineering/Environmental Documentation	\$354,000	\$0	\$0	\$354,000
(d)	Construction/Implementation	\$3,265,380	\$0	\$0	\$3,265,380
(e)	Grand Total (Sum rows (a) through (d) for each column)	\$3,746,080	\$0	\$0	\$3,746,080

**Table 8 – Summary Budget**

Proposal Title: Kern IRWM 2014 Drought Solicitation Implementation Grant Proposal

Individual Project Title		(a)	(b)	(c)	(d)	(e)
		Requested Grant Amount	Cost Share: Non-State Fund Source (Funding Match)	Cost Share: Other State Funding Sources	Total Cost	% Funding Match (Col b/Col d)
(a)	BVWSD Brackish Groundwater Recovery Project	\$2,075,000	\$727,000	\$0	\$2,802,000	26%
(b)	ID4 CVC Extension Lining Project (Phase 1-Pool No. 7)	\$4,025,000	\$2,099,240	\$0	\$6,124,240	34%
(c)	AEWSD In-Lieu Program	\$2,075,000	\$749,600	\$0	\$2,824,600	27%
(d)	BCWD Water Main Replacement and Meter Installation Project	\$3,746,080	\$0	\$0	\$3,746,080	0%
(e)	Proposal Total <i>Sum rows (a) through (d) for each column</i>	\$11,921,080	\$3,575,840	\$0	\$15,496,920	23%
(f)	DAC Funding Match Waiver Total <i>Sum column (d) only for projects seeking DAC funding match waiver in rows (a) through (d)</i>	-	-	-	\$3,746,080	
(g)	Grand Total <i>Subtract row (f) from row (e) for column (d) and recalculate column (e)</i>	-	-	-	\$11,750,840	30%